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ABSTRACT

A study explored the universality of widely accepted descriptors of the ideal speaking voice in cross-gender and cross-cultural perspective. To construct and contrast the ideal voice types, university students from Mexico and Arizona described the ideal voice type under consideration and completed a semantic differential indicating the collective perception of the ideal voice pitch, rate, volume, and clarity of diction. Intrasocietal findings regarding the ideal, ideal male, and ideal female voice types in Mexico revealed a close correlation on all four dimensions of pitch, volume, rate, and diction. Intrasocietal findings in the United States revealed that while neither the male nor the female voice conformed completely to the ideal, the ideal male voice conformed more closely to the cultural ideal. Intersocietal comparison revealed that the ideal speaker's voice in Mexico and the United States shared the qualities of clear enunciation and cheerfulness, while being well-modulated and free of regional accents. The ideal male vocal delivery in both cultures was somewhat slow and low in pitch. However, the ideal Mexican male voice used greater volume and more care with diction than the ideal United States male voice. The ideal female voice types in Mexico and the United States were similarly described as soft in volume, medium to somewhat slow in rate, and careful in enunciation. However, the ideal Mexican female voice was additionally expected to be delicate and sensual. (HTH)

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Gender and Culture As Determinants of the Ideal Voice

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Abstract

"GENDER AND CULTURE AS DETERMINANTS OF THE 'IDEAL VOICE'"

It is generally believed that gender and culture tend to affect our notions of the "ideal voice," but that these variables are relatively insignificant in comparison to three characteristics of ideal voice typically associated with "good speech": (1) that it be easily understood, (2) unobtrusive, and (3) appropriate (Fisher, 1975). This study explored the universality of widely accepted descriptors of the ideal voice in cross-gender and cross-cultural perspective. The study probed the intersubjective typification of the ideal speaker's voice, the ideal male, and the ideal female voice, in Mexico and the United States.

Intrasocietal findings regarding the ideal, ideal male and ideal female voice types in Mexico revealed a close correlation on all four dimensions of pitch, volume, rate and diction. Intrasocietal findings in the United States revealed that while neither the male nor the female voice conformed completely to the ideal, the ideal male voice conformed more closely to the cultural ideal.

Intersocietal comparison revealed that the ideal speaker's voice in Mexico and the United States shares the qualities of clear enunciation and cheerfulness, while being well-modulated and free of regional accent. The ideal male vocal delivery in both cultures was expected to be somewhat low in pitch and somewhat slow. However, the ideal Mexican male was expected to use greater volume and take more care with diction than the United States male.

The ideal female voice types in Mexico and the United States were similarly described as soft in volume, medium to somewhat slow in rate of delivery, and careful in enunciation. However, the ideal Mexican female voice was additionally expected to be delicate and sensual.

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GENDER CULTURE AS DETERMINANTS OF THE "IDEAL VOICE"

Introduction

It is generally believed that gender and culture tend to affect our notions of the "ideal voice," but that these variables are relatively insignificant in comparison to three characteristics of ideal voice typically associated with "good speech": (1) that is be easily understood, (2) unobtrusive, and (3) appropriate (Fisher, 1975). This study explored the universality of widely accepted descriptors of the ideal voice in cross-gender and cross-cultural perspective. The study probed the intersubjective typification of the ideal speaker's voice, the ideal male, and the ideal female voice, in Mexico and the United States. The purpose was to construct and contrast the ideal voice types within and across these two cultures. The research questions which guided the study were: What are the collectively perceived "ideal voice types" in Mexico and the United States? Then, to what degree do the ideal male and ideal female voice types correspond to the ideal voice type within each culture?

Beyond the conceptualization of the notion of the "ideal" voice is the centrality of the concern in contemporary social and political life. "How did I sound?" is an often asked question by those seeking personal or public prominence or response.

Sometimes this question is prompted by a radio or television interview and at other times the question is prompted by self evaluation. Whatever the motivation the question is a lingering and elusive one.

The authors are indebted to Dr. Richard Nagasawa for his invaluable contributions to this research.

Culturally, in the United States we have some biases about a "good" voice and what it sounds like. As previously stated, Fisher iterates the dimensions. but, do these apply across cultures and across genders?

Specifically, what do research and folk wisdom say about a good voice? Morton Cooper a speech pathologist and author of Change Your Voice, Change Your Life says, "Today's most desirable voice image is 'deep macho' for men and 'sultry, deep, sexual, the Lauren Bacall voice' for women."

Indeed, are these the collective perceptions of the ideal voice and, if so, are these perceptions culture bound? That is, how do people describe what they consider to be a good voice and are these perceptions widely shared by males and females in the United States and Mexico?

Males and females were selected for survey because of the generally obvious physiological difference between the genders and because of recent discussion of the sociological difference. That is, it has been speculated that women's lack of success in the business world can be partially attributed to the "typical" women's voice. The assumption seems to be that the female voice is simply not seen as appropriate for a serious business person.

Mexico was selected as a cultural comparison for several reasons. Proximity and relative ease of data collection was a factor. Spanish language fluency of one author was another. The reality of sampling a different culture was a factor as was an awareness that Hispanics are the fastest growing minority group in the United States. Understanding of the cultural perspective of this group could facilitate acculturation.

Review of the Literature

Studies examining vocal characteristics of males and females, both within the United States and between the culture of the United States and other cultures, have generally explored paralanguage from four principle perspectives. These perspectives could be characterized as (1) measurable

differences, (2) cultural stereotypes, (3) interaction of paraverbal and actual language, (4) developmental expectations.

One body of studies has looked at measurable differences between males and females in their respective use of such vocalic features as pitch, intonation and pronunciation. Empirical investigations, for example, of sex-based linguistic differences in voice pitch have established that females typically have higher-pitched voices and males lower-pitched voices due to both anatomical and cultural factors (Snedicor, 1951; Carrell & Tiffany, 1960; Duffy, 1970). Females' intonation patterns (pitch, stress, juncture), employ more variability than male intonation patterns (Snedicor, 1940, 1951; Ginet, 1974; Richards, 1975). Brend (1972) found that the characterization of female intonation as expressive and male intonation as monotonic could be attributed to the consistent use by males of only the three lowest notes on the intonation scale, whereas, females consistently used four. Furthermore, Brend found that, unlike females, "Men avoid final patterns which do not terminate at the lowest level of pitch, and use a final short upstep only for special effects, incomplete sequence, and for certain interrogative sentences" (1975:86).

Empirical examination of measurable sex-based differences in pronunciation have consistently revealed that females are more likely to use linguistic forms characterized by correctness, free of regionalism or slang (Fisher, 1958; Labov, 1966; Fasold, 1968; Trudgill, 1972). From their review of sex differences in language, Thorne and Henley (1975) contend that correctness of female speech is probably the best documented of all sex-based linguistic differences.

A second body of studies focused on the cultural stereotypes of male/female paralanguage, identifying underlying expectations of gender-differentiated use of language. Jespersen (1922) provides an early portrayal of the stereotypes

attached to male/female linguistic behavior. Jespersen characterized women's language as refined, euphemistic, and utilizing hyperbolic expressions, while asserting that male language was more innovative and used more slang. Current beliefs and stereotypes generally continue to suggest that women's speech is weaker and less effective than men's (Kramer, 1974).

Traits attributed to male speaking behavior include such things as forceful, blunt, boastful and traits attributed to female speaking behavior include emotional, detailed, gentle (Kramer, 1975). In addition, researchers have found that the vocal cue used most to discriminate between male/female speech was speech rate. Men are stereotyped as having a more stable speech rate than women (Broverman, Vogel, Broverman, Clarkson & Rosenkrantz, 1972). A third body of studies has examined the interaction between expectations of paraverbal behavior and actual language use in order to measure the process of selective perception perpetuating the cultural stereotypes of paralinguistic gender differences. Since few actual differences in language use have been empirically validated, the persistence of stereotypes suggests that perceivers are attributing more differences to male messages and female messages than are actually present. This interactive effect, resulting in selective perception, is illustrated by a recent study of male and female professors. In this study, males' and females' classroom behavior was judged differentially by student evaluators according to the sex of the professor, even when the professors used the same teaching behavior (Richardson, Macke, & Cook, 1980). Another example of selective perception is the characterization of female speaking as being loud, typically when females are not conforming to stereotypical gender-determined speaking behavior.

The fourth body of studies has investigated the prescriptive power of stereotypes on actual sex-role related speech behavior. "If interpersonal expectancies influence social interaction so as to create their own reality, people who are targets of stereotypes may conform to such expectancies and provide confirming behavioral evidence" (Christensen & Rosenthal, 1982:76). The pervasive nature of sex-role stereotypes exerts pressure on individuals to behave in sex-appropriate ways throughout their lives (Broverman, Vogel, Broverman, Clarkson & Rosenkrantz, 1972; Rubble & Higgins, 1976). Sachs, Lieberman and Erickson (1973) found that this process extends to speech communication behavior and begins at an early age. The researchers reported that judges could identify the voices of prepuberty children by sex. Since there were no essential differences in their voice mechanisms, the differences could not be attributed to anatomical sex differences. Sachs (1975) suggests that boys and girls have learned to speak in a voice and speech style appropriate for their sex. Austin (1965) likewise, observed that little boys tend to be nasal and little girls tend to be oral.

None of these four perspectives on differences in male/female linguistic behaviors has attempted to obtain a shared perception within or between cultural groups, of the ideal speaker's voice, or, indeed, the ideal male or ideal female voice. The study addresses this.

There might be some data within the previously cited sources that would provide fragmentary information about ideal voice types, but it is inferential in nature. For instance, a handbook for radio announcers (quoted by Key, 1972) stated that the reason women announcers were replaced by men after World War II when men once more become available was that "often the higher-pitched female voices were frequently vehicles for an overly polished, ultrasophisticated delivery that sounded phoney." Is this an indicator of some of the components

of the ideal voice, or, is this a presumption of a small group of people, i.e., radio station owners, of what the public considers the ideal voice?

An example of inferred differences across cultures that possibly indicates aspects of the ideal voice further highlights this point. A broadcaster, citing the reason why so few women were employed as reporters by television networks in the United States asserted that "As a whole, people don't like to hear women's voices telling them serious things" (Mannes, 1969). On the other hand, a survey conducted in Munich, Germany in 1983 by the Institute for Applied Psychology found that "catastrophes don't seem nearly as catastrophic when reported by a female broadcaster." The effect was directly attributed by German psychologists to "the more dulcet tones of the female voice." Is this an indirect indicator of cultural differences in the ideal voice between Germans and Americans? Or, could the results be attributed to other variables than the vocal cues cited? It is clear that intersubjective typification of what constitutes the ideal voice, the ideal male voice and the ideal female voice is required to separate out this information that is only indirectly alluded to in prior studies. This study will use intersubjective typification to construct and contrast ideal types in a more direct and systematic manner.

In their typification studies, Berger and Luckmann (1967) suggested that knowledge of a stock of common social actions generally allows individuals to smoothly negotiate the everyday world. Schutz and Luckmann (1973) further developed the concept of a "stock of knowledge" as a compilation of collectively perceived "ideal types" which act as behavioral models in everyday life. McKinney (1969) described the human tendency toward typification or structuring of the world by means of categorical types as a central feature of human cognition.

This study probes the intersubjective typification of the ideal speaker's voice, the ideal male and the ideal female voice in samples of university students in Mexico and the United States. Its purpose is to construct and contrast the ideal voice types cross-culturally. The analysis of these typifications within and between cultures extends our understanding of the structure of the "stock of knowledge" alluded to by Berger, Luckmann, Schutz and other social scientists in the United States.

Further, the purpose is to integrate extant knowledge of the four perspectives of vocal characteristics with data that compress and expand categories and approaches. That is, some dimensions of previous work are considered in different contexts which wrest new information.

Methodology. In order to construct and contrast the ideal, the ideal make, and the ideal female voice typifications in Mexico and the United States, university students of similar socioeconomic background between the ages of seventeen and twenty-four were asked to complete a two-part survey instrument. Part one of the survey was an open-ended paragraph; Part two was a semantic differential response.

In the first part, the subjects were asked to write a paragraph describing the ideal voice type under consideration. The "ideal voice" instrument was administered to 99 student subjects at the Universidad Autonoma de Guadalajara in Mexico and 98 student respondents at Arizona State University in the United States during the 1982-1983 scholastic year. The instrument to determine the "ideal male voice" was completed by 45 students in Mexico and 59 students in the United States, and the "ideal female voice" rating were completed by 45 students in Mexico and 59 students in the United

States, and the "ideal female voice" rating were completed by 45 students in Mexico and 69 students in the United States during the same time period. Sample subjects were cross-culturally comparable in age and socioeconomic status.

The descriptors used by the subjects to describe the ideal voice types were abstracted through content analysis by a team of bilingual researchers. Table 1 presents the list of descriptors based upon the responses to the directive: Describe the "ideal voice", the "ideal male voice", and the "ideal female voice".

The bilingual research team first listed and counted all descriptors elicited from respondents. After persual of the entire list in both Spanish, and in English, there appeared to be a natural break point in the number of times a given descriptor was listed. The decision to include a specific descriptor was determined numerically as follows: any descriptor mentioned four times or more in any of the three ideal voice patterns was included for further consideration. For example, the word "consistent" was used more than four times in the category "ideal voice in the United States." "Consistent" was thus included as a descriptor. The responses were then converted to the percentage of respondents who mentioned a given descriptor in each voice category. For example, Table 1 indicates that the descriptor "clear enunciation" is more important in Mexico than in the United States, i.e., 97% of the Mexican respondents mentioned it, in contrast to 52% of the United States respondents.

In the second part of the research instrument, the semantic differential technique was employed to ascertain the collective perception of the ideal voice types on the dimensions of pitch, rate, volume and clarity of diction. Four universal vocal descriptor categories were identified for consideration

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TABLE 1

DESCRIPTORS DERIVED FROM CONTENT ANALYSIS CONCERNING THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE TYPES IN MEXICO AND THE UNITED STATES

DESCRIPTOR	MEXICO			UNITED STATES		
	IDEAL	IDEAL MALE	IDEAL FEMALE	IDEAL	IDEAL MALE	IDEAL FEMALE
	%	%	%	%	%	%
clear enunciation *buena entonación*	97	80	89	52	48	34
firm *firme*	03	33	04	10	25	06
well-modulated *bien modulada*	23	16	20	14	07	06
without regional accent *sin acento regional*	09	00	00	06	00	00
delicate *delicada*	00	00	20	00	00	00
sensual *sensual*	00	00	16	03	07	00
cheerful *agradable*	17	16	16	11	07	01
sincere *sincera*	00	00	00	06	00	04
consistent *consistente*	00	00	00	05	03	03
medium in pitch *media en timbre*	30	02	27	07	06	19
somewhat low *algo baja*	06	04	04	14	35	15
low-pitched *baja*	15	42	04	20	38	06
loud *fuerte*	15	60	00	02	00	00
somewhat loud *algo fuerte*	12	11	00	04	07	04
somewhat soft *algo suave*	02	02	02	04	07	04
soft *suave*	00	00	64	05	04	28
somewhat rapid *algo rápida*	14	04	04	04	00	03
somewhat slow *algo despacia*	14	16	18	38	09	20
	N=99	N=45	N=45	N=98	N=69	N=69

* Percent is based upon the number of respondents who listed the descriptor.
** For initial analysis, any descriptor listed four times or more was included.
*** Samples were drawn from the Universidad Autonoma de Guadalajara and Arizona State University.

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by a cross-cultural panel of faculty members in sociology and communication: (1) pitch, (2) volume, (3) rate, and (4) diction. The corresponding adjective sets--high/low, loud/soft, rapid/slow, and careful/relaxed diction--served as the polar ends of the seven point scales. Figure 1 provides a sample of the semantic differential scale instrument.

FIGURE 1

La voz ideal de un locutor de radio es. . .

ALTA ..... BAJA
FUERTE..... SUAVE
RAPIDA ..... LENTA
DICCION.....DICCION
CUIDADOSA LAXA

The mean scores of the subjects' responses to the polar scales depicted in Figure 1 provided the mean descriptors of the ideal, ideal male, and the ideal female voice types by country presented in Table 2. The mean scores indicate that the ideal male voice is slightly lower in pitch than the ideal speaker's voice, and noticeably lower in pitch than the ideal female voice in both Mexico and the United States.

The ideal voice is perceived as medium in volume in both cultures (4.5 in Mexico and 4.7 in the United States) in contrast to the softer volume expectation for the ideal female voice (5.5 in Mexico and 5.4 in the United States). The most noticeable cross-cultural difference in the table involves the ideal male voice which is expected to be considerably louder in Mexico than in the United States. This difference in expectation is evidenced by an average of over two positive points on the semantic scale.

TABLE 2

MEAN DESCRIPTORS OF THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE IN MEXICO AND THE UNITED STATES

	MEXICO			UNITED STATES		
	IDEAL VOICE	MALE IDEAL	FEMALE IDEAL	IDEAL VOICE	MALE IDEAL	FEMALE IDEAL
pitch: HIGH/LOW	5.2	5.4	5.1	5.4	5.8	4.8
volume: LOUD/SOFT	4.5	3.3	5.5	4.7	5.0	5.4
rate: RAPID/SLOW	4.5	4.7	4.8	4.8	5.1	5.2
diction: CAREFUL/ RELAXED	3.0	3.0	3.0	4.4	4.8	4.5
	N=99	N=45	N=45	N=98	N=69	N=69

*Data sources included the Universidad Autónoma de Guadalajara in Jalisco, Mexico, and Arizona State University in the United States.

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The ideal, ideal male, and ideal female voice types in Mexico and the United States are depicted as extremely close in semantic space with regard to rate. The six ideal voice types vary less than half a point. The most consistent difference cross-culturally occurs in the category of diction in which the three ideal voice types in Mexico are identical (3.0). This is in contrast to the ideal voice types in the United States which are described as considerably less concerned with care in enunciation (4.4 to 4.8).

To effect further analysis, Osgood's D statistic (Osgood, et. al., 1957) was used to determine the "common meaning assigned to the ideal voice types." This statistic allows the researcher to measure the degree to which groups differ in their use of descriptors of the ideal, ideal male, and ideal female voice types. More specifically, the D statistic measures the distance between two concepts. In this case the concept areas are ideal and the ideal gender-determined voice in common semantic space. These pairs were derived from the responses to the semantic differentials. The formula is:

$$D_{ij} = \sqrt{(X_i - X_j)^2} = \sqrt{d_{ij}^2}$$

In this formula, D is the linear distance between concepts of ideal voice i and j, and X_i and X_j are the scores derived for ideal voice types i and j on the same subjective scale. The differences (D's) are computed for all the paired combinations of the concepts and arranged in a symmetrical matrix to find the ideal voice typifications which cluster, or "go together."

The use of the D statistic extended the analysis capacity of the study of ideal voice types. That is, through its use, it was possible to contrast and compare not only the individual component descriptors of the three ideal voice types within and between cultures, but also the overall conceptual fit of the six constructed types to one another.

Figure 3 portrays the relationships among the ideal voice typifications in the United States. In contrast to the situation in Mexico, the ideal and the ideal male voice types form a close match: both are described as firm, low, cheerful, well-modulated, somewhat slow in rate of delivery, and characterized by clear enunciation. Since volume was not significantly mentioned in the ideal type, no comparison based upon that characteristic is possible.

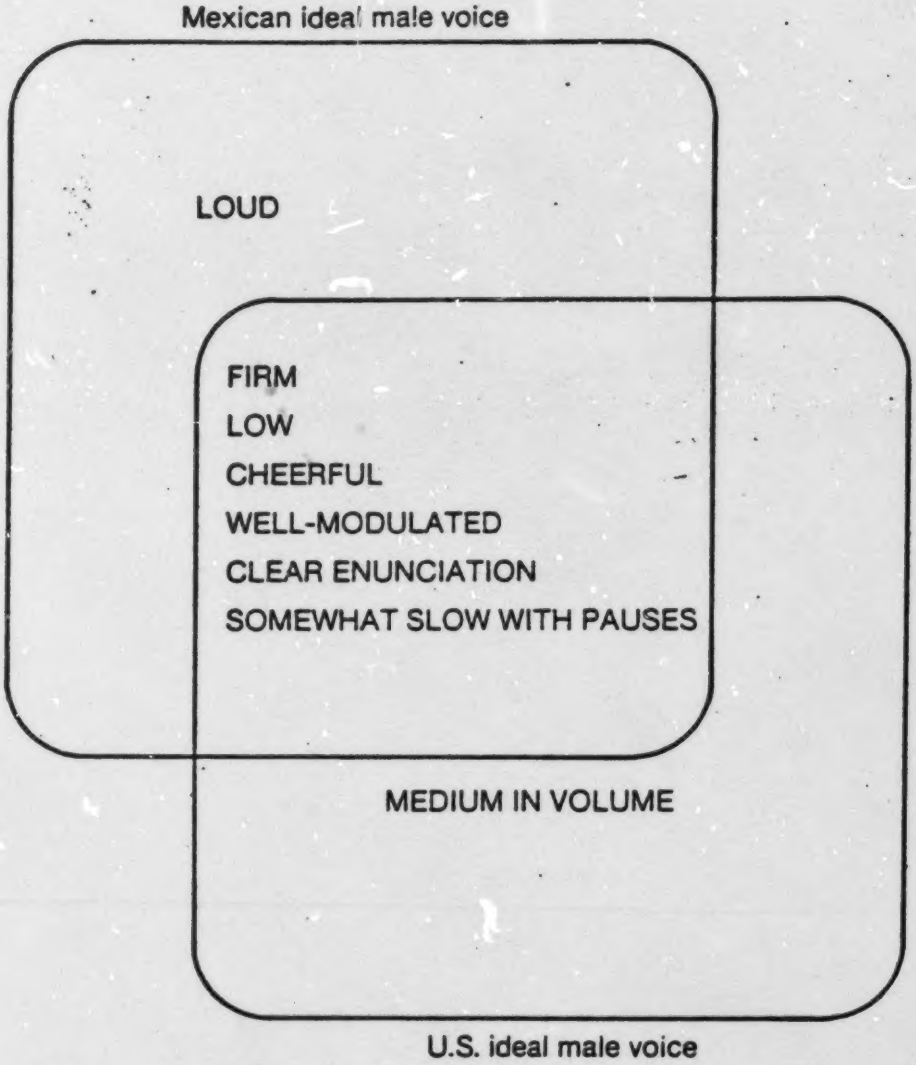
In contrast to the close match between the "ideal/ideal male" voice pair, the female ideal voice type is identified by two descriptors which preclude simultaneous approximation of the ideal female and the ideal speaker's voice ideals. A female can either conform to the feminine ideal typification by being soft in volume and medium in pitch, or approximate the ideal speaker's voice by speaking with moderate volume and low pitch; adherence to one ideal type precludes close approximation to the other.

Between country comparisons. Figures 4, 5, and 6 contrast the ideal voice types between cultures. Figure 4 reveals very close correspondence between the ideal male voice in Mexico and the United States: both are described as firm, low, cheerful, well-modulated, somewhat slow with pauses, and characterized by clear enunciation. In only one dimension do the culturally determined ideal male voice types differ: the Mexican male ideal is depicted as loud where as the United States ideal male is described as moderate or medium in volume.

Figure 5 suggests that the ideal female voice type in both Mexico and the United States is soft in volume, clear in enunciation, medium in pitch, and somewhat slow in pauses. However, in addition, the Mexican ideal voice type is depicted as sensual, delicate, and cheerful.

FIGURE 4

A COMPARISON OF THE IDEAL MALE VOICE TYPES IN MEXICO AND THE U.S.



* Derived from Tables 3 and 4 of this study based upon samples drawn from the Universidad Autónoma de Guadalajara and Arizona State University.

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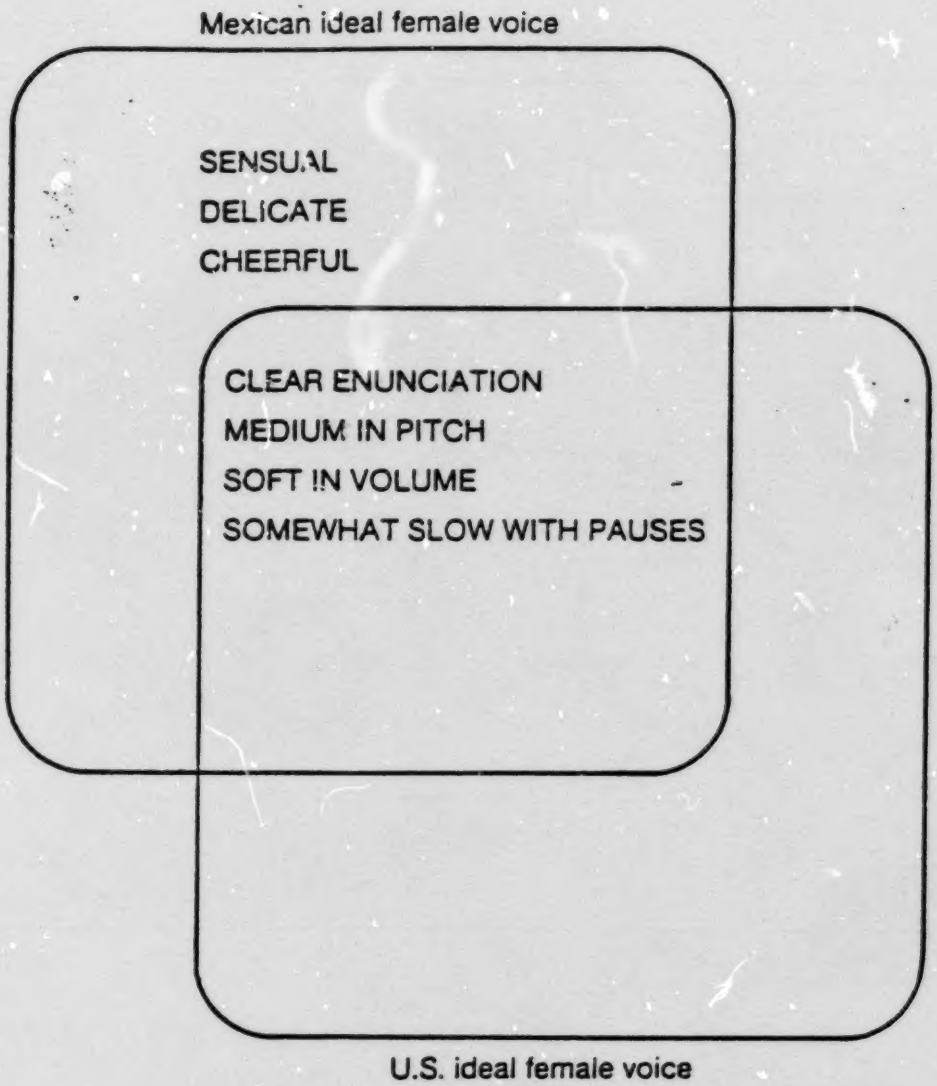
FIGURE 5

A COMPARISON OF THE IDEAL FEMALE VOICE TYPES IN MEXICO AND THE U.S.



Derived from Tables 3 and 4 of this study based upon data drawn from samples in the Universidad Autónoma de Guadalajara and Arizona State University. *

*Derived from Tables 3 and 4 of this study based upon data drawn from samples in the Universidad Autonoma de Guadalajara and Arizona State University.

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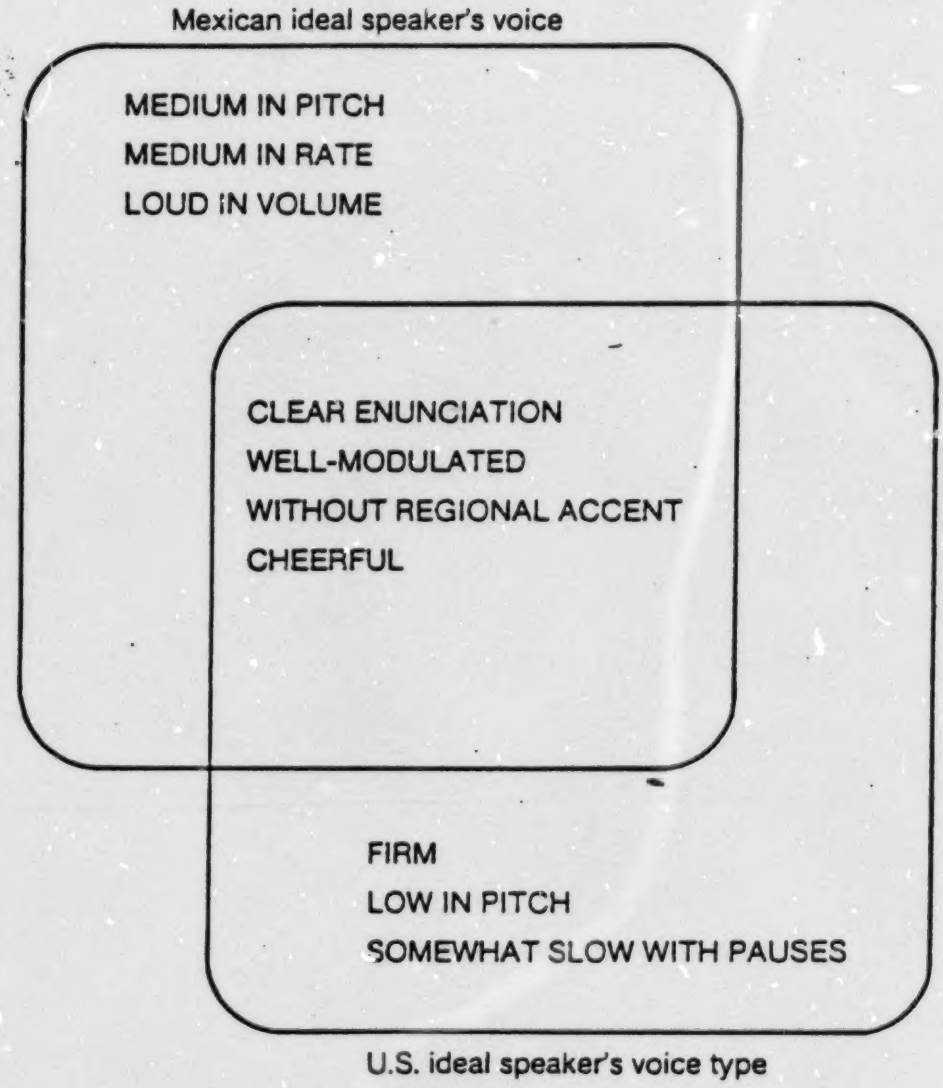
FIGURE 6

A COMPARISON OF THE IDEAL SPEAKER'S VOICE TYPES IN MEXICO AND THE U.S.



* Derived from Tables 3 and 4 based upon data drawn from the Universidad Autónoma de Guadalajara and Arizona State University. *

*Derived from Tables 3 and 4 based upon data drawn from the Universidad Autonoma de Guadalajara and Arizona State University.

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Figure 6 portrays the relationship between the ideal speaker's voice across cultures. Both ideal voice types are described as cheerful, well-modulated and characterized by a clear enunciation without regional accent. In contrast to the Mexican ideal voice type which is expected to be medium in rate and pitch, and loud in volume, the United States ideal type is identified as firm, low, and somewhat slow with pauses. Thus the qualities associated with the ideal speaker's voice differ in rate, pitch, and volume in Mexico and the United States.

Osgood's D Matrix. The D matrix analysis or Osgood's D statistic was employed to analyze the ideal, ideal male, and ideal female voice types in terms of the following four basic vocal components: pitch, volume, rate, and care with diction. The D statistic provided an objective measure of the relative location of the ideal voice types in common semantic space. Table 5 presents the matrices that give the distance between the voice types in Mexico and in the United States.

For the Mexican sample, the D's suggest that the ideal female voice is closest to what is considered to be the "ideal voice." Although the male ideal voice is also linked to the "ideal voice," it is not quite as close to the ideal as the female ideal type. The d for the "ideal voice/ideal female voice" pair shows the lowest value in the matrix (1.05) which suggests that the ideal voice and the ideal female voice are perceived as having a common semantic space. The D for the "ideal voice/ideal male voice" is also relatively low (1.23) suggesting a similiar though less marked tendency toward common meaning. In both instances the ideal voice is the voice in common. Unlike the gender ideal/ideal voice pairs, the "ideal male/ideal female" pair does not appear in a common semantic space in Mexico (D=2.22).

Data analysis. Descriptors of the ideal voice derived from content analysis are depicted in Tables 3 and 4. These tables include vocal descriptors spontaneously mentioned by more than 7% of the subjects surveyed in Mexico and the United States. For example, Table 3 indicates that the adjective "delicate" was elicited from 7% or more of the respondents in only one of the categories considered: ideal female voice in Mexico. Table 4 includes the vocal descriptors concerned with pitch, rate, and volume. The model descriptor in each category was used for contrastive analysis. From this table, it can be detected that the ideal male pitch in both Mexico and the United States is low, and that the ideal female pitch in both countries is medium. Thus, the pitch of the ideal female voice more closely approximates the ideal speaker's voice in Mexico. In contrast, the ideal male voice is most closely associated with the pitch ideal in the United States. Also, the ideal female voice is soft in volume in contrast to both the ideal and the ideal male voice typifications in Mexico and the United States.

Within country comparisons. Figure 2 portrays the relationships among the ideal voice types within the Mexican culture. The figure shows that the ideal and the ideal male voice types in Mexico share four qualities in common. Both the ideal and ideal male are loud, cheerful, well-modulated, and characterized by clear enunciation. In contrast to the ideal voice, the ideal male voice is additionally identified as firm, low and somewhat slow in rate of delivery with pauses.

The ideal female voice type in Mexico also shares four qualities in common with the ideal voice type: they are both described as cheerful, well-modulated, medium in pitch, and characterized by clear enunciation. In contrast to both the ideal and the ideal male voice types, the female ideal voice types is additionally described as delicate, sensual, and soft.

TABLE 3

DESCRIPTORS DERIVED FROM CONTENT ANALYSIS CONCERNING THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE TYPES IN MEXICO AND THE U.S.

DESCRIPTOR	Mexico			United States		
	IDEAL	IDEAL MALE	IDEAL FEMALE	IDEAL	IDEAL MALE	IDEAL FEMALE
clear enunciation	+	+	+	+	+	+
firm	0	+	0	+	+	0
well-modulated	+	+	+	+	+	0
without regional accent	+	0	0	+	0	0
delicate	0	0	+	0	0	0
sensual	0	0	+	0	0	0
cheerful	+	+	+	+	+	0
	N=99	N=45	N=45	N=98	N=69	N=69

+ = mentioned by 7% or more of the sample population.
0 = mentioned by less than 7% of the sample population.

* Samples were drawn from the Universidad Autónoma de Guadalajara and Arizona State University during the 1982-1983 scholastic year. *

TABLE 4

MODAL DESCRIPTORS DERIVED FROM CONTENT ANALYSIS OF THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE TYPES IN MEXICO AND THE U.S.

DESCRIPTOR CATEGORY	Mexico			United States		
	IDEAL	IDEAL MALE	IDEAL FEMALE	IDEAL	IDEAL MALE	IDEAL FEMALE
PITCH	medium	low	medium	low	low	medium
VOLUME	loud	loud	soft	medium	medium	soft
RATE	medium	somewhat slow	somewhat slow	somewhat slow	somewhat slow	somewhat slow

* Samples were drawn from the Universidad Autónoma de Guadalajara and Arizona State University during the 1982-1983 scholastic year. *

*Samples were drawn from the Universidad Autonoma de Guadalajara and Arizona State University during the 1982-1983 scholastic year.

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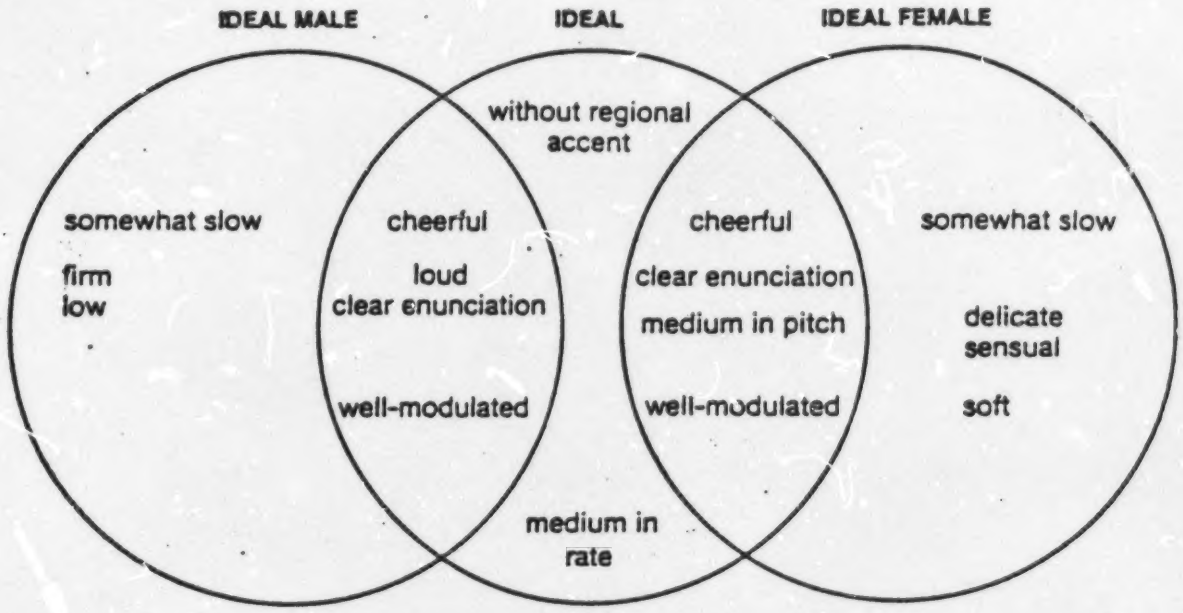
FIGURE 2

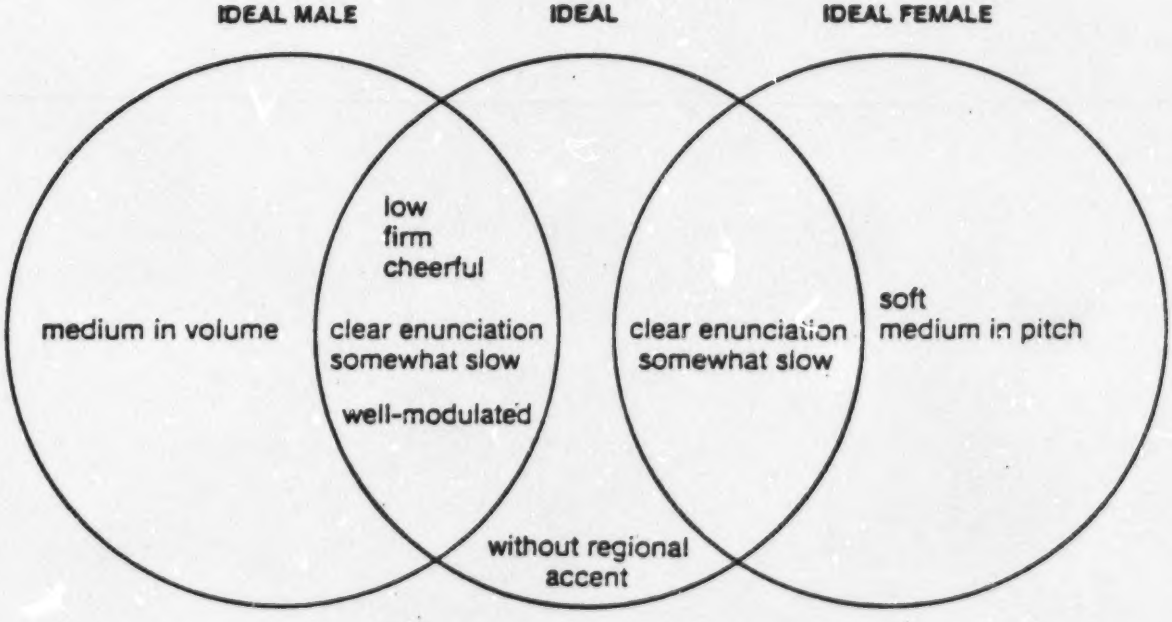
THE RELATIONSHIPS AMONG THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE TYPES IN MEXICO.



* Derived from Tables 3 and 4 of this study based upon samples drawn from the Universidad Autónoma de Guadalajara and Arizona State University.

FIGURE 3

THE RELATIONSHIPS AMONG THE IDEAL, IDEAL MALE, AND IDEAL FEMALE VOICE TYPES IN THE UNITED STATES.



* Derived from Tables 3 and 4 of this study based upon samples drawn from the Universidad Autónoma de Guadalajara and Arizona State University.

*Derived from Tables 3 and 4 of this study based upon samples drawn from the Universidad Autonoma de Guadalajara and Arizona State University.

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Hofman's Transformation Matrix. To transform the D matrices, the D's in each matrix are divided by the square root of the summed distances in the matrix. This sums to unity and hence makes the matrices comparable. The transformed D's (labeled D_n) from the pooled matrices now approximate normality. D_n is expressed as follows:

$$D_n = \frac{D_q}{\sqrt{n \sum D_q^2}} \qquad \text{and} \qquad \sum^{n} (D^r_{nq}) = 1.0$$

In this transformation formula, D_n is a transformed D and n is the number of interconcept distances between items in the matrix. The critical distance is determined according to how the concepts cluster in the matrices which constitute the distribution; the small D_n's load somewhere below the grand mean so that an upper limit of one interval below the grand mean can be used as the critical distance. The critical distance determined through this transformation is applied to all the matrices of the samples contained in Table 5 of this study in order to determine which concepts go together or have common meaning, and which stand outside common meaning as determined by semantic distance.

It should be noted that the D values are arbitrary in the sense that the D's are relative to each other and not based upon an objective criterion to determine a critical D that defines members of a group or cluster. Thus the question might be raised: How small must a D be relative to other D's in the matrix in order to define them as possessing common semantic space? Hofman (1966) suggests a method whereby a critical distance can be determined so

that distances smaller in value will define members as having common meaning, or clustering characteristics. He suggests the transformation of the D matrices to permit the use of normal curve statistics to select a critical distance.

Table 6 represents the D_n matrices for the two groups. It reveals that the initial analysis presented in Table 5 is correct with one exception: the tentative conclusion concerning the link between the "ideal female/ideal voice" pair in the United States. The critical D value determined through the Hofman transformation (D_n = .49) definitely excludes this as a pair of concepts possessing common meaning: the characteristics of the ideal speaker's voice and the ideal female voice do not cluster sufficiently to occupy the same semantic space.

Overall voice types comparisons across cultures reveal that the Mexican and the United States ideal voice types differ in one major respect: in Mexico, the ideal female voice type is closer to the ideal voice than the male ideal voice is. In contrast, the United States male ideal voice is closest to the cultural ideal, and the female ideal voice is not related to the ideal speaker's voice.

For the United States sample, the D's in Table 5 suggest that the ideal male voice is closest to the ideal voice in semantic space (D = .707). The female ideal voice is not as close to the ideal voice as its male counterpart (D = 1.01), however it is closer to the ideal speaker's voice than it is to the ideal male voice (D = 1.12). Thus, the male and the female ideal voice types are furthest apart in semantic space in the United States, as in Mexico. However, in contrast to Mexico, the male ideal voice in the United States is closest to the ideal voice type.

TABLE 5
D MATRICES

Mexico				United States			
	Ideal	Male	Female		Ideal	Male	Female
Ideal	X	1.23	1.05	Ideal	X	.707	1.01
Male		X	2.22	Male		X	1.12
Female			X	Female			X

Derived from Table 2 of this study based upon data drawn from the Universidad Autónoma de Guadalajara and Arizona State University. *

TABLE 6
Dn MATRICES

Mexico				United States			
	Ideal	Male	Female		Ideal	Male	Female
Ideal	X	.448	.382	Ideal	X	.423	.605
Male		X	.807	Male		X	.671
Female			X	Female			X

Critical value = .49

Derived from Table 2 of this study based upon data drawn from the Universidad Autónoma de Guadalajara and Arizona State University. *

*Derived from Table 2 of this study based upon data from the Universidad Autonoma de Guadalajara and Arizona State University.

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SUMMARY OF RESULTS

Intrasocietal analysis. The ideal, ideal male, and ideal female voice types in Mexico were closely matched on the dimensions of pitch, rate, and care with diction. The three voice types were characterized as somewhat low to medium in pitch, medium in rate of delivery, and careful in enunciation or diction; they differed noticeably in only one dimension: volume. Neither the male nor the female ideal type approximated the medium volume of the ideal speaker's voice type; the male was louder, and the female was softer than the ideal. Descriptors spontaneously elicited to further define the ideal types in Mexico revealed differentiation in which only the female voice was expected to be sensual and delicate, and only the male voice was expected to be firm or authoritarian. Neither gender type in Mexico was identified in terms of descriptors which would allow simultaneous approximation of the ideal cultural voice type.

Intrasocial analysis of the ideal voice types in the United States considering the four dimensions of pitch, volume, rate, and care with diction revealed that, as in Mexico, neither gender type completely conformed to the ideal speaker's voice type. However, the ideal male voice conformed much more closely than the ideal female voice. Thus, a United States male can approach both the ideal and the ideal male voice communication patterns with few conflicting behavioral directives. In contrast, the United States female cannot enact the cultural and gender-determined ideal voice types without experiencing considerable role conflict.

Intersocietal analysis. A comparison of the ideal speaker's voice type across the cultures of Mexico and the United States revealed that they share the

qualities of clear enunciation and cheerfulness, while being well-modulated and free of regional accent. The perception of ideal pitch and rate varied across cultures: The ideal in Mexico was described as medium in pitch and rate while the ideal in the United States was low in pitch and somewhat slow in rate. Additionally, the ideal speaker's voice in Mexico was described as loud and the ideal in the United States was further characterized as firm.

Intrasocietal comparison of the ideal male voice types revealed that the ideal male vocal delivery was somewhat low in pitch and somewhat slow in delivery. Both ideal male voice types were additionally described as firm, cheerful, well-modulated, and careful in enunciation. However, the ideal Mexican male was expected to use greater volume and take more care with diction than his United States counterpart.

The ideal female voice types in Mexico and the United States were similarly described as soft in volume, medium to somewhat slow in rate of delivery, and careful in enunciation. However, the ideal Mexican female voice was additionally expected to sound delicate and sensual.

DISCUSSION

The ideal speaker's voice in both Mexico and the United States did not conform completely to either ideal gender type in the respective country, and the ideal gender types provided the closest cross-cultural match of the paired types considered. This raises some interesting questions. Is there a common denominator in human perception of gender ideal voice types that transcends culture? Why do the United States with its predominantly Anglo Protestant heritage, and Mexico with its Hispanic Catholic heritage share gender-related perceptions of the ideal voice generally assumed to be the product of

acculturation? Are these parallel perceptions an approximation of male and female archetypes?

The accentuated differences expressed in both preference and expectation between the ideal male and female voice types in Mexico could be a reflection of the more traditional nature of the society, i.e., the more traditional the culture, the more the actual differences between the sexes would be exaggerated in the socialization process to maintain maximum dimorphism, or social and biological differentiation of the sexes (Van den Berghe, 1973). It would follow that the relatively few actual gender-related differences in male/female paralanguage would be accented and exaggerated through the socialization process in a more traditional culture.

The findings of this study in the less traditional culture of the United States further expands this point. No such clear-cut identifiers of traditional femininity such as delicate, sensual, and cheerful were suggested for the ideal female voice in the United States. This difference may be explained by the differing degree of traditionalism in the two cultures. Although the United States is somewhat traditional, it is more industrialized and less homogeneous in political, economic, and religious structure than Mexico in which institutional reinforcement tends to create congruent messages concerning sex role socialization. Thus, the female ideal voice is more clearly and consistently identified with refinement and affective communication generally associated with the traditional female role in Mexico.

In contrast, the pluralistic culture of the United States has generated social and political movements which have eroded the homogeneity of messages emanating from the various cultural institutions concerning sex role socialization and diffused their impact, resulting in multiple and sometimes conflicting behavioral expectations. The data suggest that, in contrast to

Mexico, the United States female is faced with a singular dilemma: She cannot enact the cultural and gender-determined ideal voice types without experiencing role conflict. By conforming to the ideal female voice type, she automatically dissociates herself from her culture's ideal voice type.

In this regard, the recent trend to use female television reporters with voices lower in pitch than the average United States female voice raises several questions. With an increasing availability of atypical female role models in the media, is an interactive effect occurring in which the perception of the ideal female voice is converging upon the ideal speaker's voice type in the United States to resolve conflicting directives for females in communication industries?

In summary, the identified differences between the ideal female voice types in this study may reflect the differing degrees of traditionalism present in the two societies, and the evolving United States female ideal voice in broadcasting. Females in the media may be selectively deleting traditionally feminine vocal characteristics in an effort to approximate the ideal and the ideal male voice types in the United States.

REFERENCES

Austin, W. M. Some social aspects of paralanguage. Canadian Journal of Linguistics, 1965, 11, 31-9.

Berger, P. and Luckmann, T. The Social Construction of Reality. Garden City, New York: Doubleday and Co., 1967.

Brend, R. M. Male-female intonation patterns in American English. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury Press, 1975.

Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., and Resenkrantz, P. S. Sex-role stereotypes: A current appraisal. Journal of Social Issues, 1972, 28, 59-78.

Carrel, J. and Tiffany, W. Phonetics: Theory and Application to Speech Improvement. New York: McGraw-Hill, 1960.

Christensen, D. and Rosenthal, R. Gender and nonverbal decoding skill as determinants of interpersonal expectancy effects. Journal of Personality and Social Psychology, 42, 75-87.

Duffy, R. Fundamental frequency characteristics of adolescent females. Language and Speech, 1970, 13, 14-24.

Fasold, R. W. A sociological study of the pronunciation of three vowels in Detroit speech. Washington, D.C.: Center for Applied Linguistics, 1968.

Fisher, H. B. Improving Voice and Articulation. Boston, Mass.: Houghton Mifflin, 1975.

Fisher, J. L. Social influence on the choice of a linguistic variant. Word, 1958, 14, 47-56.

Ginet, S. M. Linguistic behavior and the double standard. Paper presented at the Conference on Intercultural Communication, Binghamton, New York, 1974.

Henley, N. M. Power, sex, and nonverbal communication. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Hofman, J. An analysis of concept-clusters in semantic inter-concept space. American Journal of Psychology, 1967, 80, 345-354.

Jespersen, O. L. Language: Its Nature, Development and Origin. London: Alen and Unwin, 1922.

Key, M. R. Linguistic behavior of male and female. Linguistics, 1972, 88, 15-31.

Kramer, C. Folklinguistics. Psychology Today, 1974, 8, 82-85.

Kramer, C. Female and male preceptions of female and male speech. Paper presented at the Meeting of the American Sociological Association, 1975.

Labov, W. The Social Stratification of English in New York City. Washington, D.C.: Center for Applied Linguistics, 1966.

Mannes, M. Women are equal but --. In Bachelor, J. M., Henry, R. L., and Salisbury, R., eds., Current Thinking and Writing. New York: Appleton-Century-Crofts, 1969.

McKinney, J. C. Typifications, typologies, and sociological theory. Social Forces, 1969, 48, (1), 1-11.

Osgood, C. E., Suci, G. I. and Tannenbaum, P. H. The Measurement of Meaning. Urbana, Ill.: University of Illinois Press, 1957.

Richards, D. M. A comparative study of the intonation characteristics of young adult males and females. Unpublished doctoral dissertation. Case Western Reserve University, 1975.

Richardson, L. W., Cook, J. A. and Macke, A. S. Classroom authority management of male and female professors, mentioned in Richardson, L. W., The Dynamics of Sex and Gender. Boston, Mass.: Houghton Mifflin Company, 1981.

Rubble, D. N. and Higgins, E. T. Effects of group sex composition on self-presentation and sex-typing. Journal of Social Issues, 1976, 32, 125-32.

Sachs, J., Lieberman, P. and Erickson, D. Anatomical and cultural determinants of male and female speech. In Shuy, R. W. and Fasold, R. W., eds., Language Attitudes: Current Trends and Prospects. Washington: Georgetown University Press, 1973, 74-84.

Sachs, J. Cues to the identification of sex in children's speech. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Schutz, A. and Luckmann, T. Structures of the Life-World. Evanston, Ill.: Northwestern University Press, 1973.

Snedicor, J. C. Studies in the pitch and duration characteristics of superior speakers. Unpublished doctoral dissertation, State University of Iowa, 1940.

Snedicor, J. C. The pitch and duration characteristics of superior female speakers during oral reading. Journal of Speech and Hearing Disorders, 1951, 61, 44-52.

Thorne, B. and Henley, N. Difference and dominance: An overview of language, gender, and society. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Trudgill, P. Sex, covert prestige, and linguistic change in the urban British English of Norwich. Language in Society, 1972, 1, 179-95.

BIBLIOGRAPHY

Abercrombie, D. Paralanguage. British Journal of Disorders of Communication, 1968, 3, 55-59.

Addington, D. W. The relationship of selected vocal characteristics to personality perception. Speech Monographs, 1968, 35, 492-503.

Addington, D. W. The effect of vocal variations on ratings of source credibility, Speech Monographs, 1971, 38, 242-247.

Allport, G. W. and Cantril, H. Judging personality from voice. Journal of Social Psychology, 1934, 5, 37-54.

Aronovitch, C. D. The voice of personality: Stereotyped judgments and their relation to voice quality and sex of speaker. Journal of Social Psychology, 1976, 99, 207-220.

Atmyanandana, V. An experimental study on the detection of deception in cross-cultural communication. Unpublished paper. Florida State University, 1976.

Austin, W. M. Some social aspects of paralanguage. Canadian Journal of Linguistics, 1965, 11, 31-9.

Baird, J. C. and Tice, M. Imitative modeling of vocal intensity. Psychonomic Science, 1969, 19, 219-220.

Barnlund, D. C., Kendon, A., Harris, R. M. and Key, M. R. Communication styles in two cultures: Japan and the United States. In Organization of Behavior in Face-to-Face Interaction. The Hague: Mouton, 1975.

Bateson, M. C. Kinesics and paralanguage. Science, 1963, 139-200.

Battle, L. D. New dimensions in cultural communication. Publications of the Modern Language Association, 1963, 78, (2), 15-19.

Beebe, S. A. Effects of eye contact and vocal inflection upon comprehension and credibility. Unpublished doctoral dissertation. University of Missouri-Columbia, 1976.

Beekman, S. J. Sex differences in nonverbal behavior. Unpublished paper. Michigan State University, 1973.

Beier, E. G. and Zautra, A. J. Identification of vocal communication of emotions across cultures. Journal of Consulting Clinical Psychology, 1972, 39, 166.

Bentler, P. M. and Lavoie, A. L. A nonverbal semantic differential. Journal of Verbal Learning Verbal Behavior, 1972, 11, (4), 491-496.

Berger, P. and Luckmann, T. The Social Construction of Reality. Garden City, New York: Doubleday and Co., 1967.

Berryman, C. L. and Eman, V. A., eds., Communication, Language & Sex. Rowley, Mass.: Newbury House, 1980.

Black, J. W. A study of voice merit. Quarterly Journal of Speech, 1942, 28, 67-74.

Blahna, L. J., Eakins, B., Eakins, R. and Lieb-Brilhart, B. A survey of the research of sex differences in nonverbal communication. In Siscom 1975: Women's (and Men's) Communication, Proceedings of the Speech Communication Association Summer Conference II, Austin, TX, 1975.

Bowler, N. A fundamental frequency analysis of harsh vocal quality. Speech Monographs, 1964, 31, 128-134.

Bradford, A., Ferror, D. and Bradford, G. Evaluation reactions of college students to the dialect difference in the English of Mexican-Americans, Language and Speech, 1974, 17, 255-270.

Brandt, L. J. Differences among children from two socioeconomic groups in their responses to tone and words in communication. Unpublished master's thesis. Clark University, 1965.

Brend, R. M. Male-female intonation patterns in American English. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury Press, 1975.

Brown, B. L. Paralinguistics: The tacit dimension in social interaction. International Journal of Soc. Language.

Brown, B. L., Strong, W. J., and Rencher, A. C. Perceptions of personality from speech: Effects of manipulation on acoustical parameters. Journal of the Acoustical Society of America, 1973, 54, 29-33.

Brown, B. L., Strong, W. J., and Rencher, A. C. Fifty-four voices from two: The effects of simultaneous manipulations of rate, mean fundamental frequency and variance of fundamental frequency on ratings of personality from speech. Journal of Acoustical Society of America, 1974, 55, 313-318.

Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., and Resenkrantz, P. S. Sex-role stereotypes: A current appraisal. Journal of Social Issues, 1972, 28, 59-78.

Carrel, J. and Tiffany, W. Phonetics: Theory and Application to Speech Improvement. New York: McGraw-Hill, 1960.

Christensen, D. and Rosenthal, R. Gender and nonverbal decoding skill as determinants of interpersonal expectancy effects. Journal of Personality and Social Psychology, 42, 75-87.

Duffy, R. Fundamental frequency characteristics of adolescent females. Language and Speech, 1970, 13, 14-24.

Fasold, R. W. A sociological study of the pronunciation of three vowels in Detroit speech. Washington, D.C.: Center for Applied Linguistics, 1968.

"Female broadcasters' voices soften news. Arizona Republic, 9 Jan. 1983, cols. 1 & 2, p. F-10.

Fisher, H. B. Improving Voice and Articulation. Boston, Mass.: Houghton Mifflin, 1975.

Fisher, J. L. Social influence on the choice of a linguistic variant. Word, 1958, 14, 47-56.

Franken, J. Voices generated by men or women: An effect in the perception of the adequacy of a response. Unpublished paper. Arizona State University, 1982.

Ginet, S. M. Linguistic behavior and the double standard. Paper presented at the Conference on Intercultural Communication, Binghamton, New York, 1974.

Hartford, B. Phonological differences in the English of adolescent Chicanos and Chicanas. In Dubois and Crouch, p. 73-80.

Henley, N. M. Power, sex, and nonverbal communication. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Hofman, J. An analysis of concept-clusters in semantic inter-concept space. American Journal of Psychology, 1967, 80, 345-354.

Jespersen, O. L. Language: Its Nature, Development and Origin. London: Alen and Unwin, 1922.

Key, M. R. Linguistic behavior of male and female. Linguistics, 1972, 88, 15-31.

Kramarae, C. Women and Men Speaking. Rowley, Mass.: Newbury House, 1981.

Kramer, C. Folklinguistics. Psychology Today, 1974, 8, 82-85.

Kramer, C. Women's speech: Separate but unequal? Quarterly Journal of Speech, 1974, 60, 14-24.

Kramer, C. Female and male preceptions of female and male speech. Paper presented at the Meeting of the American Sociological Association, 1975.

Labov, W. The Social Stratification of English in New York City. Washington, D.C.: Center for Applied Linguistics, 1966.

Laver, J. D. Voice quality and indexical information. British Journal Disorders of Communication, 1968, 33, 43-54.

Mannes, M. Women are equal but --. In Bachelor, J. M., Henry, R. L., and Salisbury, R., eds., Current Thinking and Writing. New York: Appleton-Century-Crofts, 1969.

Martyna, W. Language and the sexes: A bibliography. Unpublished paper. Stevenson College-University of California, 1981.

McConnell-Ginet, S. Intonation in a man's world. Signs: Journal of Women in Culture and Society, 1978, 3 (3), 541-59.

McKinney, J. C. Constructive Typology and Social Theory. New York: Meredith Publishing, 1966.

McKinney, J. C. Typifications, typologies, and sociological theory. Social Forces, 1969, 48, (1), 1-11.

Osgood, C. E., Suci, G. I. and Tannenbaum, P. H. The Measurement of Meaning. Urbana, Ill.: University of Illinois Press, 1957.

Richards, D. M. A comparative study of the intonation characteristics of young adult males and females. Unpublished doctoral dissertation. Case Western Reserve University, 1975.

Richardson, L. W., Cook, J. A. and Macke, A. S. Classroom authority management of male and female professors, mentioned in Richardson, L. W., The Dynamics of Sex and Gender. Boston, Mass.: Houghton Mifflin Company, 1981.

Rubble, D. N. and Higgins, E. T. Effects of group sex composition on self-presentation and sex-typing. Journal of Social Issues, 1976, 32, 125-32.

Sachs, J., Lieberman, P. and Erickson, D. Anatomical and cultural determinants of male and female speech. In Shuy, R. W. and Fasold, R. W., eds., Language Attitudes: Current Trends and Prospects. Washington: Georgetown University Press, 1973, 74-84.

Sachs, J. Cues to the identification of sex in children's speech. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Schutz, A. and Luckmann, T. Structures of the Life-World. Evanston, Ill.: Northwestern University Press, 1973.

Schwartz, M. Identification of speaker sex from isolated, voiceless fricatives. Journal of the Acoustical Society of America, 1968, 43, (5), 1178-79.

Schwartz, M. and Rine, H. Identification of speaker sex from isolated whispered vowels. Journal of the Acoustical Society of America, 1968, 44, (6), 1736-37.

Snedicor, J. C. Studies in the pitch and duration characteristics of superior speakers. Unpublished doctoral dissertation, State University of Iowa, 1940.

Snedicor, J. C. The pitch and duration characteristics of superior female speakers during oral reading. Journal of Speech and Hearing Disorders, 1951, 61, 44-52.

Sprague, J. and Ruhly, S. Male-female communication differences in the U.S.: Review and cultural analysis of principle literature. Paper presented at the Sixth International Colloquium on Verbal Communication, 1978.

Thorne, B. and Henley, N. Difference and dominance: An overview of language, gender, and society. In Thorne, B. and Henley, N., eds., Language and Sex: Difference and Dominance. Rowley, Mass.: Newbury House, 1975.

Trudgill, P. Sex, covert prestige, and linguistic change in the urban British English of Norwich. Language in Society, 1972, 1, 179-95.

Uris, D. A Woman's Voice: A Handbook to Successful Private and Public Speaking. New York: Stein and Day, 1975.

Wright, J. T. Typifications, ideal types and research methodologies. Unpublished paper. Arizona State University, 1982.